Claims

What is claimed is:

1. In a data access system, a method of providing an Internet Protocol (IP) address for a computer device, said method comprising:

a) receiving a request from said computer device for an IP address at a subscriber side network terminal, wherein said computer is configured for operation on a wide area network, and wherein said request is in a format compatible with a wide area network;

b) translating the request from the format compatible with a wide area network into a local area network compatible request; and

c) obtaining an IP address for said computer device.

2. The method of claim 1 wherein the local area network compatible request is a dynamic host configuration protocol request.

3. The method described in claim 1 further characterized in that said computer device establishes a Point-to-Point protocol (PPP) session with said subscriber side network terminal connected to said computer device.

4. The method described in claim 1 wherein said request takes place within a point-to-point protocol session established between said computer device and said subscriber side network terminal.

5. The method described in claim 1 further characterized in that said subscriber side network terminal periodically renews an IP address lease for said IP address.

6. The method of claim 1 wherein said subscriber side terminal periodically renews said IP address lease for said IP address using Dynamic Host Configuration Protocol (DHCP) lease renewal packets.

7. An apparatus for providing connectivity to the Internet over a high speed access network, said apparatus comprising:

a) a protocol stack for receiving a request from a computer device for an IP address, wherein said request is in a format compatible with a wide area network; and

b) a translator for translating said request from said format compatible with a wide area network into a local area network compatible request.

8. The apparatus of claim 7 wherein the local area network compatible request is a dynamic host configuration protocol (DHCP) request.

9. The apparatus of claim 7 wherein said apparatus supports a connection to a twisted wire pair network using xDSL transmission.

10. The apparatus of claim 7 wherein said apparatus supports a connection to a hybrid fiber coaxial cable network.

11. A method for use in a network environment for an assignment of Internet Protocol (IP) address, the method comprising:

a) establishing a local Point-to-Point Protocol (PPP) session between a computer device and a local network interface device to acquire an IP address for the computer device;

b) using a Dynamic Host Configuration Protocol (DHCP) between the local network interface device and a remote server to acquire the IP address; and

c) relaying said IP address to the computer device using a PPP-based message.

12. The method of claim 11 further comprising:

d) periodically sending from the local network interface device a lease renewal message to the server to renew the IP address.

13. A proxy method for a universal access mechanism to a broadband access system, the method comprising:

a) requesting a connection to a broadband access network through a network interface device from a Local Area Network (LAN)-attached device;

b) establishing a Point-to-Point Protocol Over Ethernet (PPPoE) connection to an access server connected to said broadband access network;

c) performing protocol encapsulation and de-encapsulation for relaying messages transmitted between the broadband access network and the LAN-attached device for the duration of the PPPoE connection.